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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sang Woon Suh

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EXAMINER

LANIER, BENJAMIN E

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/762,536	Applicant(s) SUH ET AL.	
	Examiner BENJAMIN E. LANIER	Art Unit 2432	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,13-16 and 19-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,13-16 and 19-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/31/2009;7/9/2009;6/23/2009;3/25/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 June 2009 has been entered.

Response to Amendment

2. Applicant's amendment filed 29 June 2009 amends claims 1, 7, 13, 19, 24, 30, and 36. Applicant's amendment has been fully considered and entered.

Response to Arguments

3. Applicant argues, "The number of descramble keys in Nagai cannot meet these recited requirements...nothing in Nagai discloses or suggests the situation where **no keys, and no other copy protection information, exist.**" This argument is not persuasive because if the situation arises "where no keys" exist, then the number of keys information (504) would be zero. This would indicate that no keys are recorded.

4. Applicant argues, "Nagai always, in every embodiment, has a recording medium with encrypted data that requires at least one key to be present in order to decode the data." This argument is not persuasive because Nagai discloses (Col. 12, lines 24-41) that medium includes scramble control information (407) which indicates whether or not the main data is scrambled. If the main data was "always, in every embodiment", scrambled, this data would not be necessary.

Art Unit: 2432

5. Applicant argues, “nothing in Nagai will ever indicate if ‘the computer readable medium [does not] contain the copy protection information’ as the recited copy protection indication information can.” This argument is not persuasive because the number of keys information (504) reading zero would indicate that the main data has not been scrambled, and therefore, no keys have been recorded.

6. Applicant argues, “if no copy protection information were present, Nagai would have to be somehow modified to retain a key number with no keys, in order to meet the recited copy protection indicating information.” This argument is not persuasive because having the number of keys information read zero and having an empty key index list area (503), requires no modification of Nagai.

7. Applicant argues, “if the number of keys information was recorded in a wobble pattern, this would make directly identifying the number of keys difficult and counter productive to the purpose behind supplying this information.” This argument is not persuasive because Applicant has failed to provide evidence to support this conclusion.

8. Applicant argues, “a combination of Nagai with Timmermans impermissibly changes the function of (or makes inoperable) Nagai.” This argument is not persuasive because Applicant has failed to provide evidence to support this conclusion.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2432

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 3-4, 7, 13-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai, U.S. Patent No. 6,938,162, in view of Timmermans, U.S. Patent No. 5,737,286, and further in view of Kim, U.S. Patent No. 7,266,074. Referring to claims 1, 7, 13, 15, 24, 30, Nagai discloses an optical disc recording system wherein encrypted content is recorded on a disc such that a key management area for decrypting the content is stored in a lead-in area of the disc (Figure 1, 107 & Col. 16, lines 14-15), which meets the limitation of recording the main data based on the copy protection information. The key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of a lead-in area including a second data field area storing copy protection indicating information indicating if the computer readable medium contains the copy protection information in the first data field area or if the computer readable medium does not contain the copy protection information in the first data field area, the first data field area being separated from the second data field area, the copy protection information being encryption/decryption key information required for use in encrypting/decrypting the main data, and wherein the copy protection indicating information is included within control information

Art Unit: 2432

recorded in the lead-in area of the computer readable medium and the copy protection information is present depending on the indication of the copy protection indicating information. Nagai does not disclose that the key management information is recorded in wobbled pattern by a bi-phased modulation method. Timmermans discloses a digital storage system wherein an encrypted data file is stored on an optical disc with a decryption key stored in the track wobble (Col. 7, lines 9-14), which meets the limitation of the copy protection information being recorded in wobbled patterns, the reproducing includes detecting modulated data and detecting the copy protection information using the modulated data if the recording medium contains copy protection information for use in encrypting/decrypting the main data based on the copy protection indicating information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to record the key management information of Nagai in the track wobble of the optical disc in order to aid in the digital file recovery process as taught in Timmermans (Col. 7, lines 9-12). Timmermans does not specify recording in the wobbled pattern using bi-phased modulation method. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the wobble pattern recording of Timmermans to be performed using bi-phased modulation in order to prevent the wobble signal from being degraded due to cross talk from the wobbles of adjacent tracks as taught by Kim (Col. 9, lines 16-22).

Referring to claims 3, 4, 14, 16, 25-29, 31-35, Nagai discloses that the key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of the copy protection indicating

Art Unit: 2432

information signifies to reproduce the main data directly without utilizing the copy protection information if the copy protection indicating information indicates the computer readable medium does not contain copy protection information, the copy protection indicating information signifies to reproduce the main data based on the copy protection information if the copy protection indicating information indicates the computer readable medium contains copy protection information, determining whether the copy protection indicating information is active if the copy protection indicating information is detected, reproducing the main data directly if the copy protection indicating information is not active, and detecting the copy protection information and reproducing the main data utilizing the detecting copy protection information if the copy protection indicating information is active, reproducing includes decrypting the main data utilizing the copy protection information, the main data may be recorded utilizing the copy protection information if the recording medium contains copy protection information for use in encrypting/decrypting the data, or the main data may be recorded directly without utilizing the copy protection information, if the recording medium does not contain copy protection information for use in encrypting/decrypting the main data, the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium does not contain copy protection information, wherein the recording records the main data without encryption, the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium contains copy protection information, but a value of the copy protection information indicates that copy protection information is not present, wherein the recording records the main data

Art Unit: 2432

without encryption, the recording medium contains copy protection information for use in encrypting/decrypting the main data when the copy protection indicating information indicates the recording medium contains copy protection information and a value of the copy protection information indicates that copy protection information is present, wherein the recording records the main data encrypted utilizing the copy protection information, encrypting the main data utilizing the copy protection information proceeds recording of the data, decrypt the main data utilizing the copy protection information.

Referring to claims 19, 36, Nagai discloses an optical disc recording system wherein encrypted content is recorded on a disc such that a key management area for decrypting the content is stored in a lead-in area of the disc (Figure 1, 107 & Col. 16, lines 14-15). The key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of detecting the copy protection indicating information indicating if the recording medium contains the copy protection information in the first area or if the computer readable medium does not contain the copy protection information in the first area, the first area being separated from the second area, the copy protection indicating information and the copy protection information being recorded, the copy protection information being encryption/decryption key information required for use in encryption/decrypting the main data, and wherein the copy protection indicating information is included within control information recorded in a lead-in area of the recording medium and the copy protection information is present depending on the indication of the copy protection indicating information. The decryption keys are used to access encrypted data on the disc (Figure

Art Unit: 2432

11), which meets the limitation of playing the main data utilizing the copy protection information if the recording medium contains copy protection information for use in encrypting/decrypting the main data, or playing the main data directly without utilizing the copy protection information, if the recording medium does not contain copy protection information for use in decrypting the main data, based on the detected copy protection indicating information, a signal processor configured to process the main data utilizing the copy protection information if the recording medium contains copy protection information for use in encrypting/decrypting the main data, or is configured to process the main data directly without utilizing the copy protection information, if the recording medium does not contain copy protection information for use in decrypting the main data based on the copy protection indicating information. Nagai does not disclose that the key management information is recorded in wobbled pattern by a bi-phased modulation method. Timmermans discloses a digital storage system wherein an encrypted data file is stored on an optical disc with a decryption key stored in the track wobble (Col. 7, lines 9-14), which meets the limitation of the copy protection information being recorded in wobbled patterns. It would have been obvious to one of ordinary skill in the art at the time the invention was made to record the key management information of Nagai in the track wobble of the optical disc in order to aid in the digital file recovery process as taught in Timmermans (Col. 7, lines 9-12). Timmermans does not specify recording in the wobbled pattern using bi-phased modulation method. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the wobble pattern recording of Timmermans to be performed using bi-phased modulation in order to prevent the wobble signal from being degraded due to cross talk from the wobbles of adjacent tracks as taught by Kim (Col. 9, lines 16-22).

Art Unit: 2432

Referring to claims 20-22, 37-39, Nagai discloses that the key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium does not contain copy protection information, the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium contains copy protection information, but a value of the copy protection information indicates that copy protection information is not present, the recording medium contains copy protection information for use in encrypting/decrypting the main data when the copy protection indicating information indicates the recording medium contains copy protection information and a value of the copy protection information indicates that copy protection information is present.

Referring to claims 23, 40, Nagai discloses that the decryption keys are used to access encrypted data on the disc (Figure 11), which meets the limitation of said playing includes decrypting the main data utilizing the copy protection information.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN E. LANIER whose telephone number is (571)272-3805. The examiner can normally be reached on M-Th 7:00am-5:30pm.

Art Unit: 2432

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Benjamin E Lanier/
Primary Examiner, Art Unit 2432